

NUTRIENT MANAGEMENT (CSP Enhancements)

October 2005

Colorado Enhancement Activity Job Sheet N-3

Name:

Use of Legumes as Green Manure or to Provide Cover for Next Crop

Payment = \$1.10 / Acre / Year for fields that have had legumes (*alfalfa, clover, etc*) used as a supply source for crop nutrient (green manure crop) or used to provide cover for next crop. The payment applies only to those acres planted to legumes and either plowed under as a green manure or sprayed to terminate growth with the subsequent crop no-tilled into the residue. **If you receive this enhancement you are not eligible for Energy Enhancement E-5.**

Legumes (or other green leaf manures) are excellent fertilizer for the soil, providing such nutrients as nitrogen, phosphorus, calcium, magnesium, micronutrients, potassium, and organic matter. Using alternative fertilizers to inorganic compounds will benefit the soil's water holding capacity and tilth. Additionally, this approach can reduce the consumption of fossil fuels and minerals used in the production of inorganic fertilizer, conserving energy in the process.

Nutrients absorbed by green manure crops or those retained within crop residues after harvest, are gradually released or "mineralized" when the crop is incorporated into the soil and subsequently decomposes. Many factors govern when the nutrients will be released including the carbon/nitrogen ratio, moisture content, particle size of the soil, method of incorporation, soil nitrogen levels, and temperature

Legumes are the most important of the green manures. There are several categories of legumes and green manures that are used in conservation farming.

- **Cover crops** - Cover crops form mulch that protects the soil from wind and water erosion and greatly reduce annual weeds in the next growing season. Examples of annual legumes include red and sweet clover, hairy vetch, winter cereals and buckwheat.
- **Catch crops / nutrient conserving crops** - A catch crop only grows briefly and is either worked in after the main crop has been harvested or planted between two main crops. The catch crop protects the soil from erosion and minimizes nutrient loss from the soil through leaching. It can also enrich the soil by adding organic matter, nitrogen or other nutrients. Examples of annual legumes used as catch crops are oilradish, red clover and buckwheat.
- **Smother crops** - A smother crop is a green manure crop is grown primarily to control weeds. It is characterized by extremely dense, vigorous and rapid growth. Smother crop species are usually selected with specific weeds in mind.

For more information on acceptable cover crops and green leaf manures, see NRCS Conservation Practice Standard 340, Cover Crop.

Documentation Required: Farmer or crop consultant certification of appropriate manure application and or planting of legumes. Use the following Table for documentation. An example is provided to assist you.

